

Section 4 Scope of Work

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3-401 Intent of Plans and Specifications

The contractor must construct the project in accordance with the plans and specifications, including changes ordered in accordance with the contract. Both the contractor and the resident engineer must be familiar with the work to be done and the commonly accepted practices, customs, and terms used in the work.

Use judgement when dealing with problems arising from ambiguity or apparent conflict in the plans and specifications. Review the work from the contractor's viewpoint, as well as the engineer's. The resident engineer's interpretation should be one that a reasonable contractor, exercising prudence and caution, would obtain from the contract documents. Guard against decisions based on a reasonable doubt. Also, avoid searching out and using pure technicalities or making unreasonable inferences.

3-401 Intent of Plans and Specifications

3-402 Final Cleaning Up

Section 4-1.02, "Final Cleaning Up," of the *Standard Specifications* requires the contractor to clean up the work site. In addition to this general requirement, Section 22, "Finishing Roadway," of the *Standard Specifications*, contains more detailed requirements for cleaning the roadway. For more information, see Section 4-22, "Finishing Roadway," of the *Construction Manual* (manual).

Before recommending relief of maintenance or acceptance of the contract, ensure the contractor meets all the requirements for cleaning up the site. Section 4-1.02 permits certain construction signs to be left in place until after contract acceptance. However, before contract acceptance, require the contractor to remove all construction signs except those necessary to cover work performed on the last day of the contract.

3-402 Final Cleaning Up

3-403 Changes

Based on the State Contract Act, Caltrans policy is to limit changes to those required to complete the work as contemplated at the time the plans and specifications were approved. If proposed changes do not conform to this policy, the work must be performed by a separate contract unless compelling reasons exist that justify the changes in the current contract. If added work, which conforms to the policy, is not required immediately, consider performing the work by a separate contract.

Adequately analyze all proposed changes for environmental considerations, for obligations or commitments to other agencies, and for effects on the orderly completion of the entire contract. When a project nears completion, evaluate carefully the effects of changes on the contract's time of completion. Changes ordered near the contract's completion could disrupt the contractor's schedule and costs. They could also substantially delay the public's use of the facility and disrupt the planned use of Caltrans forces.

3-403 Changes

When you determine that a change must be made, include the additional work by a contract change order. Discuss with the contractor all elements of a change, including the method of compensation and the effect on contract time. Your objective during the discussion is to develop full agreement or to identify elements that require negotiation or that could lead to protest. Your objective is also to ensure the contractor accurately understands all the elements of the change.

3-403A Procedure and Protest

The contractor may protest the terms or conditions of an approved contract change order. The protest must be made in accordance with the requirements in Section 4-1.03A, "Procedure and Protest," of the *Standard Specifications*. The protest must be concerned solely with compensation or time. Moreover, no basis exists for protesting the requirement to perform the added or revised work because the specifications require the contractor to perform ordered work.

The specifications allow the resident engineer to order work before the approval of a contract change order providing for that work. However, an approved contract change order should be issued as soon as possible. If the contractor does protest the contract change order, the sooner the protest is made, the sooner the issue can be addressed and resolved.

3-403B Increased or Decreased Quantities

When the total pay quantity of a contract item varies from the engineer's estimate by more than 25 percent, the variation may be the result of more or fewer units than shown in the engineer's estimate required to complete the planned work. The variance may also result from ordered changes or a combination of both of these factors. When the variation does exceed 25 percent, adjust the compensation in accordance with Section 4-1.03B, "Increased or Decreased Quantities," of the *Standard Specifications* or document in the contract records the reason for not making an adjustment in compensation. When the accumulated increase or decrease in contract item units shown on a contract change order exceeds 25 percent of the engineer's estimate, the overrun or underrun must be acknowledged and provided for in the current contract change order. You can provide for this overrun or underrun through one of the following options, whichever is applicable:

- Adjust the contract price in accordance with Section 4-1.03B.
- Defer any adjustment in compensation due to the overrun or underrun.
- State in writing that the contract item is not subject to adjustment. See Section 5-3, "Contract Change Orders," of this manual for a discussion and examples of contract change orders providing for adjustments in compensation resulting from increased or decreased quantities.

3-403B (1) Increases of More Than 25 Percent

It is usually appropriate to defer adjustment if work on the contract item has not been completed. Additional contract change orders may be affecting the quantity, or the number of units required to complete planned work may not be known. However, as soon as unit costs and final quantities can be reasonably determined, calculate any required unit adjustment and provide for it through a contract change order. When work on the contract item is completed, you may apply the unit adjustment to the total number of units in excess of 125 percent of the engineer's estimate.

Unless requested by the contractor in writing, the engineer does not have to adjust the contract price of an item if the contract item cost of the work in excess of 125 percent of the engineer's estimate is less than \$5000. However, before exercising

this right, ensure Caltrans will not gain any economic benefit from an adjustment. On the other hand, make an adjustment if it would decrease cost and the amount of the decrease would exceed the cost of making the adjustment.

3-403B (2) Decreases of More Than 25 Percent

If a contract item underruns the engineer's estimate by more than 25 percent, inform the contractor in writing as soon as work on the item has been completed. Unless the contractor requests an underrun adjustment in writing, no adjustment will be made.

3-403B (3) Eliminated Items

Section 4-1.03B(3), "Eliminated Items," of the *Standard Specifications* applies only to contract items eliminated in their entirety. Advise the contractor as soon as it is known that an item will be eliminated. Caltrans will not be responsible for costs incurred for material ordered after notification.

In the contract change order providing for the elimination of a contract item, ensure you cover the disposition of surplus material. Refer to the information below, titled "Surplus and Salvaged Material," for how to handle surplus material resulting from an eliminated item that cannot be returned to the vendor.

3-403B (4) Surplus and Salvaged Material

Minor differences between quantities of material required to complete the planned work and quantities shown in the engineer's estimate or shown in quantity summaries on the contract plans are normal operating differences. Caltrans is not liable for a surplus of material resulting from these operating differences.

If the final quantity of an item is less than 75 percent of the engineer's estimate, include any actual loss due to excess material in the costs as computed in accordance with section 4-1.03B(2), "Decreases of More Than 25 Percent," of the *Standard Specifications*. Do not make any allowance for material the contractor keeps.

Caltrans recognizes that certain materials or manufactured items required for the planned construction may be unique and not useable by the contractor, the supplier, or for other projects or customers. If such materials or items become surplus by reason of an ordered change, resulting in a direct and unavoidable loss to the contractor, such loss must be compensated. Determine compensation on the basis of actual cost as provided in Section 4-1.03B(3), "Eliminated Items," of the *Standard Specifications*. The guidelines below describe how to dispose of material that the contractor cannot economically dispose of.

Base a determination to salvage items made surplus by ordered changes on economic benefit to Caltrans, conservation of the energy and materials required to fabricate the items, or both. Base economic benefit on the following:

- The item's condition is adequate to perform its function satisfactorily. Damage does not necessarily make an item unsuitable for salvage. Caltrans has the capability to repair some items, so investigate this approach before deciding to dispose of a damaged item. Also consider repair costs when determining the cost-effectiveness of salvaging.
- The value equals or exceeds the difference in the cost of salvaging (including hauling) and the cost of removal and disposal.

Additionally, an item should be salvaged if it meets one or more of the following conditions:

- It is a stock item with a definite, foreseeable use. Stock items include all items that Caltrans normally uses.
- It is not a stock item, but can be put to immediate use or has a definite, foreseeable use. This classification would include items that can be reinstalled in the immediate project or could be installed on future projects.
- It is part of an electrical installation owned jointly with another agency, and the other agency requests its salvage.
- It can be used immediately for some other beneficial purpose.

Most districts maintain a district salvage yard or other designated areas for receiving salvaged material. Each district also has a district recycle coordinator. Before the delivery of potentially salvageable items, make arrangements with the appropriate person. Materials should not be salvaged until such arrangements are made.

3-403C Changes in Character of Work

Before work can be considered “changed in character,” the engineer must have ordered a change to the plans or specifications. If such an ordered change materially increases or decreases the unit cost of a contract item, then a change in character has occurred. Changes in character of work are not to be confused with “differing site conditions.” For a discussion of differing site conditions, see Section 3-5, “Control of Work,” of this manual.

When calculating the adjustment for a change in character of work, the original bid price bears no relation to the adjustment unless it can be demonstrated that the bid price actually represents the cost of the work. Section 5-3, “Contract Change Orders,” of this manual contains examples of calculations and sample contract change orders.

3-403D Extra Work

Extra work is any new and unforeseen work that cannot be covered by a contract item or a combination of contract items, or it may be work designated as extra work in the specifications. Extra work is not a payment method. See Section 3-9, “Measurement and Payment,” and Section 5-3 of this manual for a discussion of payment methods for extra work.

All new and unforeseen work is not necessarily extra work. Caltrans policy requires you to use as a guide the specifications’ definitions of the various contract items. If the added work involved in an ordered change can be defined as the same as items included in the contract, payment must be at the contract item price.

If the added work in the change can be defined as contract items, but a change exists in the unit cost, make payment under the provisions of Section 4-1.03C, “Changes in Character of Work,” of the *Standard Specifications*,” rather than for the entire added work as extra work.

New and unforeseen work, whether paid for under an item or classified as extra work, becomes a part of the contract when added by an approved contract change order. The contractor bears the same responsibility for this added work as for any other work under the contract.

3-404 Construction-Evaluated Research

One of Caltrans' goals is to continue to improve the effectiveness of our products, information, and services. The Division of Construction participation is important in demonstrating the effectiveness of new products and services.

Construction contracts that include evaluations of new products require the resident engineer to participate in the new product evaluation. The form and evaluation criteria should be included in the resident engineer's pending file. If the evaluation information is not in the file, the resident engineer should contact the new products coordinator in the Office of Materials Engineering and Testing Services (METS).

To add and evaluate a new product for an ongoing construction contract requires a contract change order. To approve the contract change order, the following is required:

- Confirmation from the new products coordinator of METS that the assessment is necessary and the evaluation criteria are readily available.
- Determination from the resident engineer that the addition of the new product is incidental to the work.
- Concurrence from the Division of Construction new products coordinator.

Forward the evaluation report for all construction-evaluated research to the new products coordinator of METS within 30 days of completing the evaluation of the new product.

3-405 Detours

The contract plans may include detour plans required for traffic passing through the project. Pay for the construction of these planned detours, temporary signing, and other traffic control devices at contract item prices. The cost of repairing damage to detours caused by public traffic will be paid for as extra work.

If it is necessary to construct detours that are not provided for in the project plans and specifications, contract change orders must provide for these detours. For design details, you may consult with the district design unit if necessary. In all cases, the district traffic unit must concur with detour design and signing provided for by contract change order.

3-405A Use of Local Streets and Roads

Use of local streets and roads to detour state highway traffic requires agreements or other arrangements to be made with the local agency. When the use of local roads for detours is included in the project plans, the district design unit will have made these arrangements. When contract changes require the use of local streets and roads, contact the project manager for assistance in making the proper arrangements with the local agency.

3-404

Construction-Evaluated Research

3-405

Detours

3-406 3-406 Use of the Materials Found on the Work

Use of the Materials Found on the Work

The engineer's designation of selected material takes precedence over the contractor's request for the use of materials found on the work.

The specifications provide that the engineer's approval is necessary for the contractor to use materials from within the planned slopes and grade lines, and written authorization is required for the use of materials outside the planned slope and grade lines. "Approval for the use of materials found on the work" shall be given in writing from the resident engineer, but "written authorization to use materials outside of planned lines and grades" must be by contract change order.

The authorization for excavation outside the planned slopes and grade must be justified as a benefit to the Caltrans. Under no circumstances should such work be authorized if it in any way adversely affects the appearance or function of the planned project.